



An expert assessment on climate change and health - With a European focus on lungs and allergies

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Abstract:

BACKGROUND: For almost 20 years, the Intergovernmental Panel on Climate Change has been assessing the potential health risks associated with climate change; with increasingly convincing evidence that climate change presents existing impacts on human health. In industrialized countries climate change may further affect public health and in particular respiratory health, through existing health stressors, including, anticipated increased number of deaths and acute morbidity due to heat waves; increased frequency of cardiopulmonary events due to higher concentrations of air pollutants; and altered spatial and temporal distribution of allergens and some infectious disease vectors. Additionally exposure to moulds and contaminants from water damaged buildings may increase. **METHODS:** We undertook an expert elicitation amongst European researchers engaged in environmental medicine or respiratory health. All experts were actively publishing researchers on lung disease and air pollution, climate and health or a closely related research. We conducted an online questionnaire on proposed causal diagrams and determined levels of confidence that climate change will have an impact on a series of stressors. In a workshop following the online questionnaire, half of the experts further discussed the results and reasons for differences in assessments of the state of knowledge on exposures and health effects. **RESULTS:** Out of 16 experts, 100% expressed high to very high confidence that climate change would increase the frequency of heat waves. At least half expressed high or very high confidence that climate change would increase levels of pollen (50%), particulate matter (PM_{2.5}) (55%), and ozone (70%). While clarity is needed around the impacts of increased exposures to health impacts of some stressors, including ozone and particulate matter levels, it was noted that definitive knowledge is not a prerequisite for policy action. Information to the public, preventive measures, monitoring and warning systems were among the most commonly mentioned preventative actions. **CONCLUSIONS:** This group of experts identifies clear health risks associated with climate change, and express opinions about these risks even while they do not necessarily regard themselves as covering all areas of expertise. Since some changes in exposure have already been observed, the consensus is that there is already a scientific basis for preventative action, and that the associated adaptation and mitigation policies should also be evidence based.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3388443>

Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other

Climate Change and Human Health Literature Portal

elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature

Air Pollution: Allergens, Ozone, Particulate Matter

Temperature: Extreme Cold, Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

Health Co-Benefit/Co-Harm (Adaption/Mitigation):

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact:

specification of health effect or disease related to climate change exposure

Respiratory Effect

Respiratory Effect: Asthma, Upper Respiratory Allergy, Other Respiratory Effect

Respiratory Condition (other) : respiratory morbidity and mortality

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified

